

CLAIMS

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What we claim is:

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1. A rapid access tire valve for a pneumatic tire on a rim of a vehicle with said valve comprising:
 - a hollow stem having a stop-valve chamber located at close proximity to the coupling end of said stem;
 - a rubber base attached to the mounting end of said stem by means of an over-molding procedure, said base having means of mounting said valve on a rim of a vehicle;
 - a connector configured to be releasably engageable with said valve to provide an uninterruptible path for the conveyance of the pressurized media between the interior of a tire and the source of pressurized media;
 - a flange embodiment located at the coupling end of said stem to communicate with locking feature of said connector;
 - a first cylindrical embodiment adjoined to the front portion of said flange embodiment through a forward slope on the coupling end of said stem to create a sealing relation with sealing element of said connector;
 - a second cylindrical embodiment adjoined to the rear portion of said flange embodiment through a rear slope;
 - a force-operated pressure stop-valve sealingly installed into the valve chamber of said stem for blocking the passage of media through the bore of said stem in normal operating position; and
 - a protective cap to be pressed onto and over said coupling end so as to protect said stop valve and the surface of said flanged end during normal course of operation.
2. A valve as set forth in claim 1 wherein said valve chamber has internal screw thread for said stop-valve installation.
3. A valve as set forth in claim 1 wherein said flange embodiment is about 9 mm in diameter.

- 250 4. A valve as set forth in claim 1 wherein said first cylindrical embodiment is about 7 mm in diameter.
5. A valve as set forth in claim 1 wherein said second cylindrical embodiment is about 7 mm in diameter.
- 255 6. A valve as set forth in claim 1 wherein said first cylindrical embodiment is adjacent to said flange embodiment through a forward cone portion having a slope between 0 degrees and 45 degrees.
7. A valve as set forth in claim 1 wherein the said second cylindrical embodiment is adjacent to said flange embodiment through a rear cone portion having a slope between 45 degrees and 90 degrees.
- 260 8. A valve as set forth in claim 1 wherein said slopes are spherical.
9. A valve as set forth in claim 1 wherein said slopes and said flange embodiment are configured as an annular groove.
10. A valve as set forth in claim 1 wherein said forward slope is for the secure releasable engagement of the locking elements of said connector with said valve.
- 265 11. A valve as set forth in claim 1 wherein said rear slope is for the secure releasable engagement of the locking elements of said connector with said valve.
12. A valve as set forth in claim 1 wherein said pressure stop-valve is force-actuable by making contact with the core depressor of said connector.
- 270 13. A valve as set forth in claim 1 wherein sealed joint between said valve and said connector is provided by the sealing element present in said connector.
14. A valve as set forth in claim 1 wherein a releasable joint between said connector and said valve is provided by deployment of at least one displaceable detent of said connector.
- 275 15. A valve as set forth in claim 1 wherein the position of said sealing element of said connector in relation to the length of said core depressor is so as to provide reliable seal between said valve and said connector prior to the opening of said stop valve.
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16. A valve as set forth in claim 1 wherein said valve has a means of attaching it to the communication outlet aperture of the inner tube of a conventional pneumatic tire.
17. A valve as set forth in claim 1 wherein said rubber base is configured for snap-in installation of said valve into aperture of a wheel rim.
18. A stem of the valve as set forth in claim 1 wherein said stem has a threaded end to provide means of mounting said valve through an aperture of a wheel rim by locking nuts.

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